

Breathing new life into pulmonary research

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When people talk about this being the century of biology, they look forward to more and more advances in our understanding of how life works — and the benefits that go with that understanding. Biology has entered a phase where basic discoveries can be applied to a wide range of health problems. Whether the next breakthroughs come from genomic research into DNA, for instance, or new insights into how physics and chemistry underpin the mechanisms of life, they will have a dramatic, life-changing impact. We don't know everything, but what we do know has given biologists and medical researchers impressive new powers.

A team of scientists and bioengineers at Los Alamos National Laboratory have developed a tissue-engineered artificial lung called PuLMo, for Pulmonary Lung Model, that simulates the response of the human lung to drugs, toxins, particles and other agents. As an artificial organ that you can see inside, the laptop-sized device is a unique technological scaffold for building all kinds of life-improving research and technology.

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